Attachment A

FY 2009 NGGDPP Proposal Information Summary

Geological Survey of Alabama

Project Title: Continuation of Metadata Development for Geological Data at the Geological Survey of Alabama

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Component of Program Priority: Metadata

Amount Requested:

Salaries
Fringe Benefits
Travel Expenses
Other Direct Costs
Indirect Costs
Grand Total

Proposed Start Date: September 1, 2009

Proposed Duration: 12 months

Has the proposal been submitted to any other agency for funding: no

Active NGGDPP-related grants: Initiation of Metadata Development for Geological and Geophysical Data at the Geological Survey of Alabama (NGGDPP)

ABSTRACT

The Geological Survey of Alabama (GSA) maintains a core and sample storage warehouse that contains about 12,000 square feet of shelved space in which more than 67,000 boxes of samples are stored. The warehouse contains cores and well cuttings from oil and gas wells, well cuttings from water wells, industrial and GSA project cores, coal samples, and vibracores. In a separate facility, GSA also maintains an extensive collection of more than 182,000 Paleozoic, Mesozoic, and Cenozoic fossils that occupies 69 cabinets in its paleontology collection. GSA collections were inventoried during the FY 2007 National Geological and Geophysical Data Preservation Program Year. For FY 2008, GSA initiated development of site-specific metadata records for samples in parts of the collections in the core and sample warehouse and for fossils of Paleozoic age in the paleontology collection. For FY 2009, GSA is proposing to continue the goals of its Long-Range Data Preservation Plan by continuing the process of metadata development. Metadata records will be generated for about 2,000 sets of samples currently stored in the GSA warehouse and for about 28,900 fossils of Mesozoic age in the paleontology collection. Consequently, the number of metadata created during the FY 2009 project will total about 30,900 records. While digital information exists for some samples in the warehouse, the vast majority of metadata records will be generated by examination of paper labels. The requested grant period is September 1, 2009, to August 31, 2010. The digital metadata will be submitted online for inclusion in the National Catalog and will be delivered in a "flat" spreadsheet file using the template provided by the program. In addition, a final technical report will be prepared that will document and summarize the results of the work. Preparation of metadata for the remaining GSA collections (miscellaneous collections in the warehouse and Cenozoic fossils) will be proposed in subsequent Program Years.

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INTRODUCTION

The Geological Survey of Alabama (GSA) maintains a core and sample storage warehouse in the Mary Harmon Bryant Special Collections Facility on the University of Alabama (UA) campus in Tuscaloosa, Alabama. The warehouse contains about 12,000 square feet of shelved space. GSA is closely affiliated with the State Oil and Gas Board of Alabama (OGB), which requires that cores and well cuttings be submitted and archived, and the samples are maintained by the GSA in its facility. Alabama is a major oil and gas producing state, ranking 12th nationally in natural gas production and 15th in liquid petroleum production. Consequently, GSA maintains an extensive collection of samples from oil and gas wells. The warehouse contains processed well cuttings from nearly 4,000 oil and gas wells and cores from more than 3,300 oil and gas wells. In addition, the facility houses about 450 industrial cores, 244 vibracores, nearly 2,800 sets of water well cuttings, and more than 1,500 coal samples. In total, more than 67,000 boxes of samples are stored in the GSA warehouse.

The GSA was founded in 1848 and, since then, GSA geologists have made extensive collections of Paleozoic, Mesozoic, and Cenozoic fossils from numerous world-class sites that exist in Alabama. More than 182,000 fossils occupy 69 cabinets and are housed in the basement of Walter B. Jones Hall (the main GSA building on the UA campus) as well as in the warehouse in the Special Collections Facility.

During FY 2007, GSA conducted an inventory of its geological and geophysical collections for the National Geological and Geophysical Data Preservation Program (NGGDPP). The results of the inventory were entered into the online survey at the completion of the project. For FY 2008, GSA initiated development of site-specific metadata records for individual samples in its collections. The focus is currently on the collections of the OGB, industrial cores, and water well cuttings in the core and sample warehouse and on fossils of Paleozoic age in the paleontology collection. For FY 2009, GSA will continue the development of site-specific metadata records for additional oil and gas related cores and well cuttings in the warehouse, coal samples, and fossils of Mesozoic age in the paleontology collection. The requested grant period is September 1, 2009, to August 31, 2010. The digital metadata will be submitted online for inclusion in the National Catalog. Preparation of metadata for the remaining GSA collections

(miscellaneous collections in the warehouse and Cenozoic fossils) will be proposed in subsequent Program Years.

PURPOSE AND JUSTIFICATION

The purpose of this project is to generate site-specific metadata records that describe, at the individual sample level, the contents of a significant part of the geological collections at the GSA. Where possible, the data will be extracted from existing databases. For example, information on cores from wells that were formally permitted by the OGB and were donated to the GSA/OGB can be extracted from the OGB well database, which has been made available to GSA. In contrast, construction of metadata records for specimens in the paleontology collection will require examination of the labels accompanying the individual fossils in the cabinets of the collection. Construction of some records (mud logger well cuttings and coal samples) will require compilation of information from both digital and paper sources. Because GSA collections are extensive (Tables 1, 2), metadata preparation in FY 2009 will be limited to part of the collections in the core and sample warehouse and to fossils of Mesozoic age in the paleontology collection.

The GSA/OGB collections are the only publicly accessible geologic and geophysical collections in Alabama. The collections are extensively used by the oil and gas and industrial minerals industries, academic researchers, and students. Visitors to our facility examine samples from oil and gas wells at a frequency of several times per week. Requests for assistance in the paleontology collection occur monthly. Consequently, it is imperative that these collections be preserved. Documenting individual samples in the collections through metadata construction will provide baseline information from which future preservation efforts can proceed.

STRATEGY FOR DATA COLLECTION

GSA has completed a draft of its Long-Range Data Preservation Plan. As one of its primary goals, the five-year plan includes preparation of metadata and online submission of the records to the National Digital Catalog during Years 2, 3, 4, and 5. GSA is currently preparing metadata to be submitted to the catalog as part of Year 2 of the plan. The proposed project will fulfill the goal of continuing metadata development and online submission of records during Year 3 of the GSA Long-Range Data Preservation Plan.

Table 1.— Summary of collections in the Geological Survey of Alabama core and sample warehouse.

Collections	Number of wells	Number of units
Oil and gas well cores (OGB)	3,207	17,309 boxes
Oil and gas well washed cuttings (OGB)	3,939	25,110 boxes
Oil and gas unwashed well cuttings (OGB)	Unknown	3,690 boxes
Oil and gas well cores (donated)	129	2,789 boxes
Oil and gas well cores (Florida)	36	396 boxes
Industrial cores	453	11,411 boxes
GSA project cores	13	3,143 boxes
Coastal vibracores	244	698 tubes
Water well washed cuttings	2,779	2,787 boxes
Coal samples	Not applicable	1,511 samples
Total boxes and tubes (excludes coal)	Not applicable	**67,333**

Table 2.— Summary of macro-fossil specimens in the Geological Survey of Alabama paleontology collection.

Era	Number of macro-fossil specimens
Cenozoic	124,824
Mesozoic	28,541
Paleozoic	28,943
Total	182,308

PRELIMINARY RESULTS AND PRIOR WORK

During FY 2007, GSA conducted an inventory of its geological and geophysical collections for the National Geological and Geophysical Data Preservation Program (NGGDPP). The results of the inventory were entered into the online survey at the completion of the project and are summarized in Tables 1 and 2. For FY 2008, GSA initiated development of site-specific metadata records for individual samples in its collections. The focus is currently on the collections of the OGB, industrial cores, and water well samples in the core and sample warehouse and on fossils of Paleozoic age in the paleontology collection. Metadata records are

currently being prepared for 3,207 oil and gas well cores, 3,939 sets of washed well cuttings from oil and gas wells, 453 industrial cores, and 2,779 sets of cuttings from water wells (Table 1). Metadata records are being prepared for 28,943 fossils of Paleozoic age (Table 2).

PRODUCTS/REPORTS

Files of digital metadata for individual samples in the GSA collections will be prepared and uploaded to the NGGDPP intranet site. The metadata will be delivered in a "flat" spreadsheet file using the template provided by the program. In addition, a final technical report will be prepared that will document and summarize the results of the work.

PROJECT PERSONNEL

All personnel are full time employees of GSA with the exception of the Student Aide.

PRINCIPAL INVESTIGATORS/GEOLOGISTS

W. Edward Osborne (B.S. in Earth Science, Appalachian State U., 1980; M.S. in Geology, U. of Alabama, 1985) has worked for GSA for 26 years and for the last 14 years has directed the Geologic Investigations Program which is responsible for most of the GSA collections. Osborne was Principal Investigator of the FY 2007 NGGDPP project and is currently Co-Principal Investigator of the FY 2008 project. As Co-Principal Investigator of the FY 2009 project, Osborne will coordinate the program effort, review the records for completeness and accuracy, and ensure that deliverables are completed in a timely manner.

Sandy M. Ebersole (B.S. in Geology, Austin Peay State U., 2001; M.S. in Geosciences (GIS), Murray State U., 2003; M.S. in Geological Sciences, U. of Alabama, 2007; Ph.D. in Geological Sciences, U. of Alabama, projected 2009) has been with GSA for 3 years and currently manages the paleontology collection. Ebersole was a team member of the FY 2007 NGGDPP project and currently is Co-Principal Investigator of the FY 2008 NGGDPP project. For the FY 2009 project, Ebersole will serve as Co-Principal Investigator and will coordinate metadata development for the specimens in the paleontology collection.

GEOLOGIST

Lewis Dean (B.S. in Geology, University of Alabama, 1979; M.S. in Geology, Emory University, 1981) has worked for GSA for 23 years and has managed the GSA core and sample warehouse for the last 13 years. Dean was a team member of the FY 2007 and 2008 projects. For

FY 2009, Dean will coordinate metadata development for the samples stored in the core and sample warehouse.

STUDENT AIDE

The Student Aide position is currently vacant and will be filled by a University of Alabama undergraduate or graduate student during the grant period. The student aide will prepare a large part of the metadata records.

METADATA

For FY 2009, GSA will continue the development of site-specific metadata records for oil and gas related cores in the warehouse, and for fossils of Mesozoic age in the paleontology collection. Metadata records will be prepared for 511 sets of mud logger well cuttings (included in the unwashed well cuttings in Table 1) and for 129 cores from oil and gas wells in Alabama that have been donated by exploration companies. Records will be prepared for 36 cores from oil and gas wells from locations in Florida that are adjacent to Alabama. Metadata also will be prepared for 1,511 coal samples. The paleontology collection contains 28,541 fossils of Mesozoic age for which metadata records will be generated (Table 2).

Digital information for the oil and gas cores is nearly complete. Consequently, only minor checking of labels on core boxes in the warehouse will be required to complete these metadata. In contrast, records for the mud logger cuttings are incomplete. Existing records for mud logger cuttings will be extracted from the OGB database and will be checked against the collection in the warehouse. Records will be generated for samples with no records, and any partial records will be completed. Similarly, development of metadata for coal samples will require compilation of information from both digital and paper sources. No digital records exist for the paleontology collection. Consequently, construction of metadata for specimens in the paleontology collection will require examination of the labels accompanying the individual fossils in the cabinets of the collection.

To the extent possible, metadata will be compiled by the Student Aide. However, we anticipate the need for significant assistance and oversight by GSA staff. Lewis Dean will oversee preparation of metadata for samples in the core and sample warehouse and Sandy Ebersole will coordinate documentation of samples in the paleontology collection. Lewis Dean and Sandy Ebersole will provide quality assurance by frequently checking the work of the

student aide. The Principal Investigators (W. Edward Osborne and Sandy Ebersole) will oversee the project, review the records for completeness and accuracy, ensure that the records are properly uploaded, and prepare the final report.

The metadata will be delivered in a "flat" spreadsheet file using the template provided by the program.

As part of its Long-Range Data Preservation Plan, GSA has initiated a program to periodically update the National Catalog. Lewis Dean, the warehouse manager and project participant, will generate new records as he logs newly acquired, formally permitted oil and gas well samples into the warehouse. In addition, metadata will be required for all newly acquired geological and geophysical data as part of the project through which they are obtained prior to submitting them to the appropriate GSA collection. Metadata will be created for all new fossil specimens as they are submitted to the paleontology collection. All metadata records will be submitted to the warehouse manager who will upload them to the National Catalog biannually.

DETAILED BUDGET (ATTACHMENT B FOLLOWS)

Salaries and Wages:

W. Edward Osborne, GSA Manager II, Co-Principal Investigator, daily rate:

Sandy M. Ebersole, Geologist II, Co-Principal Investigator, daily rate:

Lewis S. Dean, Geologist II, daily rate:

Student Aide (University of Alabama Student), currently vacant, daily rate:

Total salaries funded: . Total salaries GSA:

The base salary rates used to estimate personnel costs were derived from GSA payroll records for the period ending December 15, 2008. All salaries are established by the State of Alabama Personnel Board for each job classification in accordance with State and Federal guidelines. The base salary rates used in this budget have been adjusted for proration of authorized holiday, vacation, and sick leave time as allowed by Federal guidelines and for anticipated annual performance (merit) raises for the project term based on the State Personnel Board regulations.

Fringe benefits: Employee fringe benefits are assessed against all salaried personnel. The computed benefit rate of 34.0% is equal to that assessed by the Alabama Department of Finance against salaries paid from State appropriated funds.

Total benefits funded: . Total benefits GSA:

Travel expenses: There will be one trip to the Data Preservation Techniques Workshop in Bloomington, Indiana, July 14 and 15, 2009. Osborne and Ebersole will attend and will travel by car (4 days of travel each). Registration is $120 each. Lodging is $104 each. Mileage is 1,100 miles round trip at $0.55 per mile. Meal allowance is $30 per day ($39 is the normal allowance; GSA will allow $30 to account for any meals provided during the workshop) for 4 days for Osborne and Ebersole.

Total travel funded: . Total travel GSA: $0.

Supplies: Expendable supplies are estimated based on specific project needs and are priced at State contract prices wherever practical. All purchasing procedures are established by the Alabama Department of Finance, Division of Purchases and Stores. Anticipated project supplies are minor office supplies and photocopies.

Total supplies funded: Total Supplies GSA:

Equipment: None.

Contractual services: None.

Computer maintenance charges: None.

Total direct costs:

Total direct costs funded: . Total direct costs GSA: (1:1 Federal/State match).

Indirect charges: The Labor Overhead (indirect rate) is a negotiated rate between the GSA/OGB and the U.S. Department of the Interior, the cognizant Federal audit agency. The current negotiation agreement establishes an indirect rate of 60.64%, which is applied only to salaries. A copy of the Indirect Rate Agreement is attached.

Total indirect costs funded: Total indirect costs GSA: (1:1 Federal/State match).

Total charges:

Total charges funded: Total charges GSA: (1:1 Federal/State match).

Attachment B

NATIONAL GEOLOGICAL AND GEOPHYSICAL DATA PRESERVATION PROGRAM
FY 2009 DETAILED BUDGET

State: Alabama

Proposal Short Title: Continuation of Metadata Development

Budget Category	Federal Funding "Requested"	Matching Funds "Proposed"
SALARIES (all are GSA staff; rates are per day):		
Co-Principal Investigators		
Osborne 15 days@	$	$
Ebersole 25 days@	$	$
Geologist		
Dean 25 days@	$	$
Student Aide		
Vacant 60 days@		
TOTAL SALARIES:	$	$
TOTAL FRINGE BENEFITS	$	$
Budget Category	**Federal Funding "Requested"**	**Matching Funds "Proposed"**
TRAVEL EXPENSES:		
WORKSHOP TRAVEL EXPENSES		
Osborne (Co-Principal Investigator)		
Ebersole (Co-Principal Investigator)		
Per Diem $30/day, 4 days, each		
Lodging Cost $104, each		
Mileage 1,100 miles @ $0.55/mile		
Registration $120 each		
OTHER DIRECT COSTS:		
Photocopies, minor office supplies	$	$
TOTAL DIRECT COSTS:	$	$
INDIRECT COST :	$	$
GRAND TOTAL:	$	$

Employee fringe benefits are assessed against all salaried personnel. The computed benefit rate of is equal to that assessed by the Alabama Department of Finance against salaries paid from State appropriated funds. The indirect cost rate is a negotiated rate between the Geological Survey/State Oil and Gas Board of Alabama and the U.S. Department of the Interior, the cognizant Federal audit agency. The current negotiation agreement establishes an indirect rate of ercent (applied only to salaries).